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ABSTRACT

As NAFTA opens the border between the United States and Mexico, the need for binational cooperation in education becomes ever more imperative. This chapter provides a rationale for binational education--the benefits of binational education both for language-minority students and for the majority culture--and describes a variety of cooperative bicultural programs for students and teachers. These programs include: (1) the Leadership Enhancement Academy for Binational Education in neighboring El Paso (Texas) and Ciudad Juarez (Mexico), which brings together educators, community leaders, and parents to cultivate relationships and develop an integrated systemic approach to binational education in the cities' schools; (2) two-way bilingual classrooms in which English- and Spanish-speaking students are grouped in heterogeneous cooperative learning teams; (3) teachers' learning communities that provide collegial support for implementing a complex cooperative learning model; and (4) binational staff development activities involving U.S. and Mexican teachers from neighboring cities along the border. Particular emphasis is placed on an effective binational staff development process that helps teachers transfer appropriate knowledge and behaviors into the bilingual cooperative classroom, and provides ongoing support for personal development, interpersonal relationships, and program implementation. Contains 50 references. (Author/SV)

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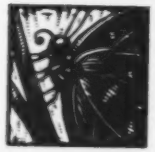
CHAPTER 13



Bilingual, Bicultural, and Binational Cooperative Learning Communities for Students and Teachers

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As NAFTA opens the border between the United States and Mexico, the need for binational cooperation in education becomes ever more imperative. This chapter provides a rationale for binational education and describes a variety of cooperative bicultural programs for students and teachers. These programs include two-way bilingual classrooms in which English-speaking and Spanish-speaking students are grouped in heterogeneous cooperative learning teams, teachers' learning communities that provide collegial support for implementing a complex cooperative learning model, and binational staff development activities involving U.S. and Mexican teachers from neighboring cities along the border. Particular emphasis is placed on an effective binational staff development process that helps teachers transfer appropriate knowledge and behaviors into the bilingual cooperative classroom, and provides ongoing support for personal development, interpersonal relationships, and program implementation.

This chapter will focus on providing a rationale for binational education followed by examples and recommendations for joint educational endeavors. The examples of cooperative activities are based on contextualized longitudinal studies (Calderón, 1984-1995; Durán, in

press; Hertz-Lazarowitz & Calderón, 1994; Hertz-Lazarowitz, Ivory, & Calderón, 1993; Slavin & Madden, 1995; Stevens, Madden, Slavin, & Farnish, 1987). Collectively, the studies have given us a framework consisting of best instructional approaches: ways of training teachers, administrators, and communities; providing follow-up support to all staff development activities; and dealing with innovation implementation in whole-school efforts. The basic elements of each of these components will be described, and will be interrelated in the final section.

Why Binational Education? What Are the Benefits for the Majority Population?

The benefits for the majority culture in the United States are many. For instance, it is projected that by the year 2000, the effects of NAFTA will boost the dollar value of already vigorous Texas trade with Mexico by about 13 percent to $29.2 billion, adding approximately 113,000 new jobs (Texas Education Agency, 1995). Other border states and states where Mexico's twin-plants are situated such as Michigan, Ohio, Georgia, and Florida, will surely benefit. However, without a shift in educational goals, Cummins' conclusions might prevail:

> Dwindling resources in an era of dwindling commitment to second language acquisition add up to an increasingly high number of tongue-tied Americans. The consequences of generalized language incompetence include an international trade gap that threatens both short- and long-term economic stability, inadequate intelligence [information], and insufficient expertise in international communication that threatens national security and exacerbates cultural isolation (1993).

Although a planned strategy is not yet in place, recently there has been increased interest in second-language study for economic purposes.

> It was automatically assumed that anyone studying a second language as a major field was going to be either a teacher, an interpreter, or a translator and had no other career options. There is still a need for people in those professions. There is also a growing need for individuals who possess advanced skills in second languages and are trained in various technical areas. This is a result of increased activity in international business, the inflow of large amounts of foreign capital to the United States, increased internationalization, and an expanded awareness of the need to conduct not only business but also diplomatic relations in the language of the host country (Weatherford, 1986).

Interpreters and translators in the United States have more work than ever. Large companies are now seeking employees who possess a combination of bilingual and business/managerial skills. Such people have an

edge over others without language capability. The supply and demand deficit in bilingual education is especially felt in the education profession. Every state in the nation has a dramatic shortage of bilingual teachers. California has an annual shortage of approximately 20,000 (California State Department of Education, 1994). Texas needs an average of 14,000 a year (Texas Education Agency, 1995). Due to such shortages, bilingual teachers can pick their school and generally receive an additional stipend for being bilingual.

What are the benefits of a binational education for the language-minority population?

The population of language-minority students is quickly growing. In 1985-86, there were 1,472,000 limited-English-proficient students enrolled in U.S. schools. In 1992-93, 7 years later, the enrollment was up to 2,736,000.

It is a well-known fact that U.S. schools with large language-minority student populations are typically Chapter 1 schools. Chapter 1 schools are generally the most underfunded, understaffed, and ineffective in our nation (Slavin, Dolan, Wasik, Ross, & Smith, 1994). With respect to change and innovations, these schools have been dormant for many years, supporting a level of mediocrity and status quo that is hard to change. Unfortunately, many of these schools also lie near the U.S.-Mexican border.

In Texas, many of the schools labeled as "low performing" schools by the Texas Education Agency (1993) are also those with bilingual programs and a 90-97 percent Hispanic enrollment. They also have the highest percentage of teachers on temporary teaching permits. These schools espouse the mind-set that bilingual programs are remedial programs and a vehicle for students to learn English quickly and forget their mother tongue. Many of the best teachers learn to move out of these depressing situations, leaving novices or less capable teachers to deal with language-minority students. These types of compensatory bilingual programs perpetuate the stereotypes and stigmas that lead students to academic and personal failure.

Why are schools the way they are today? Some reasons we all are very familiar with are as follows:

- Schools fail to incorporate minority students' language and culture into the total school program.
- They exclude minority communities from participation in school decisions.
- They assume a transmission approach to pedagogy that relegates students to a passive role, instead of a constructivist approach in which students become active learners.
- They use a Band-Aid approach to staff development.
- Students who have attended school in their native countries are often

ahead of U.S.-born students in mathematics and science. However, they are typically placed in unchallenging courses.
- Secondary-school-age immigrants are either expected to read sophisticated textbooks to learn complex subject matter or are placed in watered-down remedial courses.
- The clash of differences between the native culture and the U.S. culture leads to intergenerational conflict in many immigrant families.

In addition, researchers also find that

- Most high-school-age immigrant students need to work; many have little access to quality health care, information, or means of support; many live in crowded, poorly maintained apartments (McDonnell & Hill, 1993).
- Schools and state educational agencies approach assessment in a way that places the blame for failure on the student rather than on the educational context (Cummins, 1981).
- Only about half of the high school students who take the first year of a second language go on to a second year, and fewer than 4 percent of all high school students go on to a third. In many other countries, secondary school students must take at least 4 years of a second language (Draper, 1989).
- Between 1966 and 1979, the number of U.S. colleges requiring second-language study for admission fell from 34 percent to 8 percent (Draper, 1989)
- By 1988, second-language teaching at the elementary school level had virtually disappeared, reaching less than 1 percent of all students (Draper, 1989).

These are but a few well-known examples out of many which impact negatively on language minorities, and particularly low-schooled immigrant students. As joint educational endeavors begin to target quality education, language-minority students stand to gain considerably. A set of recommendations are listed below that targets changes in school structures to ensure language-minority-student success.

Binational Exchanges Have Existed for Many Years

While economic links between the United States and Mexico continue to grow, legislative and popular commitment to language programs ebbs and flows. "Binational education" is starting to catch on, but it will be some time before funding allocations are appropriated specifically for such efforts. Therefore, local initiatives have sprouted that display a spirit of cooperation but not much money. Chapter 2 in this book describes such an intervention and how it was triggered by research.

It is these types of contextualized efforts that are going to bring about short- and long-range success for students. However, contextualized interventions and research must be accompanied by systematic approaches to professional development and learning communities where all participants expand their knowledge and skills in order to develop appropriate and effective schooling practices.

Up-Scaling Binational Exchanges

The border cities of El Paso and Cuidad Juárez have a long tradition of small-scale border exchanges that come and go with the persons who initiate them. As interest intensified on both sides of the border with the ratification of NAFTA, the Leadership Enhancement Academy for Binational Education (LEA) evolved.

The LEA is sponsored by a grant from the Texas Education Agency that focuses on recruitment, retention, and support systems for minority teachers and teachers of critical shortage areas—mainly bilingual education. The purpose of the LEA is to establish a comprehensive systematic mechanism for educators from both sides of the border who seek to improve schooling practices for Latino students.

The Leadership Enhancement Academy for Binational Education

Principals, assistant principals, and coordinators from both border cities are collaborating to develop and mold the Leadership Enhancement Academy. Administrators, teachers, Chamber of Commerce representatives, and parents meet monthly at various school districts on both sides of the border to study the multiple issues of bilingual and binational education.

The 1-day sessions consist of several speakers who are experts on topics such as NAFTA, binational teacher exchanges, and effective bilingual instructional practices. State and federal education agency officials also come to present cutting-edge information. For instance, the Director of the Texas Teacher Recruitment, Retention, and Assistance (TTRRA) Program talked about relevant plans by the agency, and expressed the need to take back to the Texas Education Agency the ideas generated by the group to integrate into Texas state plans. At that same session, the vice presidents of the Juárez and El Paso Chambers of Commerce presented information on the impact NAFTA has already had on the border. They also touched on implications for educators and suggested ways both sectors could begin to collaborate. Educators, in turn, suggested ways the business sector could collaborate with and contribute to education.

After listening to speakers, participants discussed the implications and ideas derived from each speaker and converted those into immediate plans and activities. The participants clustered in teams by levels: pre-K, elementary, and secondary. University and private sector representatives joined a team of their choice. Each team began with a round-robin strategy

in which participants took turns sharing their purpose for involvement in the project. Next, individuals listed what they or their school could contribute to other schools and what they needed or would like to receive in return. For the final activity, schools from El Paso partnered with schools from Juárez and scheduled visits. The agendas for months to come will continue to intensify these relationships. A future meeting was set aside for teachers and administrators from both sides of the border to do 15-minute roundtable presentations on "best practices" in teaching, curriculum, educational policies, and school reform. Other binational programs such as "Hands Across the Border," a program for elementary and secondary student exchanges, will be integrated into future meetings.

Purpose, Goals, and Objectives

The purpose of the Leadership Enhancement Academy for Binational Education in El Paso, Texas, is to help educators implement, research, and improve bilingual/binational education; promote bilingualism for all students; and develop a global perspective about the future. The vehicles to accomplish this are joint comprehensive staff development programs and school projects. For this purpose, the LEA team has been studying ways of coordinating binational efforts on a short-term experimental basis while keeping in mind long-term comprehensive elements and goals.

The Texas Centers for Border Economic Development, which are currently working with the LEA, have identified the following key features of a comprehensive binational education program:

- curriculum development for K-12 schools;
- a mentoring program, with substantive interaction between industry and education (K-12);
- continuing education;
- exchange programs;
- intern programs;
- certificate programs;
- conferences and seminars;
- a speakers bureau; and
- applied research (Acosta, 1995).

The LEA has adopted these recommendations and expanded upon them as a target of activities. Five goals have been developed by the LEA as follows:

Goal 1. Cultivate relationships.

- Set up the structures that support the development of relationships across the border.
- Organize learning communities for continuous growth.
- Create a center for coordination and cooperation.

Goal 2. Orchestrate professional development opportunities on both sides of the border for

- teams of administrators, teachers, parents, and community members on effective bilingual programs, cultural understanding, research-based innovative practices, etc.;
- English and Spanish mini-courses;
- equivalency credentials;
- internships in schools; and
- administrator academies on bilingual or binational school restructuring, organizational development, leadership training, supervision, coaching, and other related themes.

Goal 3. Provide access to information.

- Establish mechanisms for continued learning and sharing in communities.
- Organize conferences, seminars, teacher exhibits, and calendars of events.
- Link up with the TTRRA/UNITE bulletin board and set up an assortment of data files, news bits, and communication links.
- Work with the business sector to secure the technology and multimedia necessary for long-distance learning and staff development.
- Create a newsletter, occasional papers, program/project summaries, reports.

Goal 4. Develop an integrated systemic approach to address the multiple aspects of binational education.

- Set up a bilingual/binational pilot project in 10 schools in El Paso and Juárez.
- Coordinate collaborative efforts.
- Support school-site endeavors.
- Identify resources for sharing, and write proposals for on-going funding.

Goal 5. Conduct research and evaluation.

- Conduct workshops on research and evaluation processes.
- Conduct research on target projects.
- Set up an evaluation process for all activities to determine impact and continue development of interventions.
- Scale up effective practices.

It is subsumed in these goals that the vehicle for implementation of innovations is systematic staff development and follow-up support systems. Fortunately, there are ample literature- and researched-based examples to help us understand the process of change and how to incorporate it into new programs.

Why a Systematic Approach to Binational Professional Development?

Staff development has been one of the most talked about and least misunderstood concepts of our century. Michael Fullan (1990), Judith

Warren Little (1982), and other well-known researchers have written books about the ineffectiveness of staff development and faulty implementation of educational change. Now, in the context of NAFTA, staff development and educational change become particularly complex when we examine them from a bilingual perspective. As we get ready for the next century, we need to look at staff development in new ways that put it in sync with the educational needs of our global society.

Some guiding questions are

- What will the staff development practices of the future be like?
- How can we bridge not only knowledge gaps but human relations gaps through effective personal and professional development practices?
- How do we bridge the gap between mind-sets about binationalism, cultural pluralism, and multilingualism?
- How do we create the types of schools that will develop the talents and intellect of diverse student populations?

The binational programs are taking new risks with staff development. They are experimenting with new ways of collaborative learning across the border. It's not easy. The language of the presentations is always an issue when participants are limited in one or the other language. The logistics of holding meetings and sessions on both sides of the border are somewhat cumbersome. Communiqués are disseminated through personal delivery because the mail takes a long time to cross the border. In spite of hurdles such as these, the willingness to connect is strong enough to find solutions.

Nothing is as valuable and effective as face-to-face interaction. As administrators, teachers, and students begin meeting frequently to study the art of schooling, they are acquiring much more than knowledge about schooling. They develop sensitivity to "the other culture," a deeper understanding of others and themselves, a new view of education and their immediate surroundings, and, above all, a renewed enthusiasm for creating better opportunities for both student learning and their own professional growth.

What Should Schools for a Binational Society Look Like?

Through collaboration and combined intellectual and financial resources, schools can reconfigure existing structures to meet the demands of a global society. Schools can capitalize on the languages and talents of immigrant students and expand the pathways to their success. Schools can begin by espousing a philosophy and practices that reaffirm these standards:

- Immigrant and language-minority students are part of a whole-school integrated system.
- There are opportunities for all students in the school to become bilingual or multilingual.

- Special instructional interventions for limited-English-proficient students are of high quality and integrated into the whole-school system.
- There is equity and excellence in all aspects of schooling for immigrant students.
- The first language is used in two-way bilingual programs and has equal status with English.
- The instructional approach facilitates language acquisition and content-area mastery through multiple active-learning contexts (cooperative learning, discovery field trips, learning centers, internships, and mentors).
- There is a climate that values all cultures.
- There is a climate of collaboration and team spirit.
- There are high expectations for all students coupled with supportive systems.
- There is a high level of family engagement in schooling.
- The business community makes this school their business.
- Comprehensive staff development is ongoing and all teachers participate.
- Communities of learners are established for students, teachers, staff, administrators, and parents.
- "Bridge" programs with community colleges and local universities insure successful career paths for immigrant and all students.
- Health services and counseling are available.

A Typical Program of the Future

El Paso has a population of 750,000 and is the largest city on the Texas-Mexico border. The El Paso Independent School District, the largest in the city, has a student enrollment of 64,859 with a Hispanic student population of 72 percent and 14,742 limited-English-proficient (LEP) students. Juárez has a population of 1 million and continues growing through constant migration from the interior of Mexico and Central America.

In a border town such as El Paso, especially considering the effects of NAFTA, it is not enough to set up programs so that the district's LEP students acquire English. In fact, it is a myopic and single-sided vision of education to focus on one language in a bilingual city that faces environmental, social, political, and economic issues resulting from mutual concerns with Mexico. In contrast to the low-skilled assembly lines of the past, or maquiladoras of today (twin plants), tomorrow's work sites will require employees to frame problems, design their own tasks, evaluate outcomes, and cooperate in finding novel solutions to problems (Drucker, 1989). If students live in multicultural, bicultural, or binational communities, they must also understand and evaluate multidimensional issues that impact their society.

The Accelerated Two-Way Bilingual Program was designed to address these needs (Calderón & Carreón, 1994). The program was initiated 3

years ago at two elementary schools in El Paso Independent School District. Academic achievement, language acquisition, and biculturalism are natural partners in the program. The two-way bilingual design builds on the intellectual power of bilingualism (Cummins, 1981; Krashen & Terrell, 1983; Diaz, 1985). The program's mission is to prepare children for a multilingual multicultural world of advanced technology—a world in which they can become leaders who think critically and work collaboratively to solve the complex problems that they will face on the border.

Each class in the two-way bilingual program is staffed by two teachers, a bilingual teacher and monolingual teacher, who collaborate in the teaching process. The teacher teams have found that working together offers new opportunities for personal and professional growth. The teachers benefit from their mutual strengths. They have increased their repertoire of teaching strategies, enhanced their professional background, learned to work effectively as a team, taken turns becoming mentor and peer coach, and become more reflective and self-motivated. In addition, the teachers have a better understanding of the interaction of cultures and the value of bilingualism. To their amazement, the English-speaking teachers are acquiring Spanish along with their students!

Benefits of Two-Way Bilingual Programs for Students

What we have learned thus far from two-way bilingual education is that it provides schools an excellent tool to address the academic, language, social, and economic challenges of a bicultural and binational community. The students in the program reflect the ethnic and language makeup of the community. This program brings English speakers together with monolingual Spanish speakers to learn together in two languages. The classes at each grade level (K-5) include approximately 15 Spanish-speaking and 15 English-speaking students. As the students participate in cooperative learning activities conducted in Spanish for half of the day and in English for the other half, they acquire each other's language and gain new insights into each other's culture. They learn to work together in a mutually supportive and highly interactive environment and learn to solve problems by building on strengths in language as well as on academic knowledge.

Cooperative Learning for Students

The instructional approach used in the two-way bilingual program centers on the Cooperative Integrated Reading and Composition (CIRC) model of instruction (Calderón, 1991, 1994a-i; Hertz-Lazarowitz & Calderón, 1994; Stevens, Madden, Slavin, & Farnish, 1987). There is a strong research base on the implementation of this model in both monolingual and bilingual settings (Slavin & Madden, 1995; Slavin et al., 1994;

Stevens et al., 1987). Students in CIRC classrooms repeatedly outperform their peers in more traditional classrooms in academic, social, and linguistic development. The Bilingual CIRC provides a context for accelerated language development in two languages because the students continuously discuss, solve problems, read with partners, write extensively, and edit each other's work. They learn to collaborate in decision making, testing of organizational strategies, and accomplishing tasks efficiently and effectively.

The development of biliteracy skills through the bilingual CIRC model affects the success students experience in math, science, technology, and social studies. Content areas are learned through techniques borrowed from CIRC and also through Bilingual Group Investigation (Hertz-Lazarowitz & Calderón, 1994) projects. Cooperative learning is integrated throughout the day, and includes even simple cooperative strategies such as the round-robin.

Benefits of the Bilingual Cooperative Learning Program for Students

From other field studies in bilingual contexts, we have found that the Bilingual Cooperative Integrated Reading and Composition (BCIRC) model creates a context for quality interaction for bilingual or language-minority students. As second-language learners, students in BCIRC classrooms experience ample opportunities for expressing ideas, exchanging information, and building comprehension for literacy development. Literacy skills are practiced and developed through literature and content-area textbooks.

The BCIRC model consists of a sequence of cooperative, independent, teacher-directed learning strategies that can take 2-6 weeks to implement. Because it is based on a constructivist approach to second-language acquisition, teachers find the model adaptable to different grade levels and program options (Calderón, 1991, 1994i). For instance:

- BCIRC is being used in middle schools and high schools for teaching ESL. It is just as effective in 50-minute periods as it is in newcomer classes that are 2 or more hours long.
- BCIRC is being used in middle schools and high schools for teaching sheltered social studies, science, and math courses. It is particularly effective in schools that have class periods of 1 hour and 45 minutes, although 50-minute sessions spread out over 2 or more weeks are also effective.
- BCIRC is being used in elementary schools for transitional bilingual language arts programs, because it creates a natural transition between first- and second-language reading and writing skills.
- BCIRC is being used in elementary schools as a "reading across the

curriculum" model for content-area reading for students who need additional practice.
- BCIRC is being used for literature-based approaches, because the reading activities and writing process render an appreciation and a thorough exploration of a variety of literature for and by children.
- BCIRC is being used with basal readers, because the "Treasure Hunt" questions that teachers and students develop provide more critical thinking than the basal questions. The story-related mapping and writing suggestions also yield higher quality of student products in comparison to basal suggested activities.
- BCIRC is being used for thematic interdisciplinary units, because the 20 or so activities of 6-week units make profound learning fun. It creates a context for integrated experimentation and discovery.
- BCIRC is being used for bilingual instruction in two-way bilingual programs because students are learning through interdisciplinary interactive discussion, reading and writing in two languages with a more capable peer.

Cooperative Learning Provides a Better Context for Bilingualism

The research on these BCIRC applications during the past 5 years has found many benefits for students. The benefits found systematically across the different grade level programs that focused on the *learning of English* were that:

- BCIRC increases the variety of and frequency of second-language practice because it provides varied concrete experiences, as recommended by Krashen and Terrell (1983).
- The input from peers while working in pairs and teams of four is much more comprehensible.
- Team work on treasure hunts offers students the opportunity to hear more complex language than from the teacher in whole-class discussion.
- The variety of team activities creates natural redundancy in communication as students exchange information and requests, as recommended by Long, Brock, Crookes, Deicke, Potter, and Zhang, 1984.
- Oral communication is integrated with literacy development and is the basis for making meaning of reading texts.
- Instead of language drills or choppy pieces of language, students use continuous, ongoing discourse that relates to particular tasks, problem solving, or creative endeavors; thus, language learning becomes subconscious as students focus on cognitive endeavors.
- The carefully structured sequence becomes an information processing model that develops internal mental structures and schemata for processing information in the first language for the first few months—then the processing in the second language becomes obvious as students master subject matter.

Cooperative Learning for Biliteracy and Biculturalism

In addition to deriving the seven benefits listed above (Calderón & Carreón, 1994), students participating in two-way bilingual programs also enjoy these advantages:

- There are more possibilities for natural correction from peers and for students to develop their own self-correction devices through the frequent debriefing strategies.
- There are higher levels of linguistic accuracy and information processing accuracy, because students are always interacting with native speakers of each language.
- The questions formulated by students are genuine or what Long et al. (1984) calls referential—those where the questioner really needs the information. This is in contrast to the display questions "Is this a pencil?" that are typical in ESL programs. Students in two-way bilingual programs have to negotiate for meaning within a variety of tasks all day long!
- The students' first language acquires high status, and their self-esteem flourishes as they become experts for other students.
- When students become experts for other students in team and partner activities, the bilingual program becomes an enrichment program for all students rather than a compensatory intervention for limited-English-proficient students.
- Students understand the global aspects of literacy as well as those aspects that belong to each language and culture.
- Because students use the whole range of their first-language capabilities (through the cycle of academic and social activities), these learning and thinking processes are then naturally transferred into the follow-up cycle in the second language. Going through a cycle in each language enables faster learning of a second language while developing a high level of the first.
- The bilingual/bicultural cycle enables inclusion of a greater variety of curricular materials, real-life experiences, and authentic literature from diverse cultures.
- A safe context is created for newly arrived immigrants. Newcomers find that their language expertise and cultural capital are valued and nurtured.
- In a supportive, nonthreatening cooperative context, students learn important life skills for working in binational or multiethnic contexts.
- BCIRC consists of a sequence of team formation, team building; class building; role assignment; social and cooperative norms development; vocabulary building; formulating and testing predictions; developing oral, silent, and peer reading strategies; debriefing strategies for content, process of learning and thinking, and social behavior; reading comprehension; answering and formulating questions; writing meaningful sentences; pronunciation practice; spelling practice; mapping stories and

characters; doing different types of writing in teams and individually; editing; publishing; storytelling; presenting; and peer- and self-evaluation through portfolio rubrics, checklists, and reflection activities. As students complete this cycle in 2-to-6-week units, the myriad of skills, content, and language learned is too great to describe in this synthesis of research (Calderón, 1994b).

Documented Student Academic Achievement

BCIRC developed into a dual-language management system that enables teachers to keep track of student biliteracy progress. Students are continuously engaged in meaningful and challenging activities at all times, and time on reading and writing increases as much as 500 percent, compared to other reading methods used in bilingual classrooms. Many positive student gains in linguistic, academic, and social achievement have been documented through the 5-year study in Ysleta Independent School District in El Paso.

In the Ysleta ISD study (1988-1994), students in BCIRC experimental classrooms outperformed students in control classrooms. In this 5-year project, hundreds of experimental and control students were initially matched by levels of English and Spanish at each grade level and were tested at the end of each year with standardized tests, a criterion-referenced test for reading comprehension, writing tests in two languages, a self-esteem and cooperative attitudes inventory, and portfolio contents.

Some Students' Gains from the Ysleta Project:

- BCIRC students made greater academic gains than the control classrooms on two standardized tests: the Texas Assessment for Academic Skills and the Norm-Referenced Assessment Program for Texas.
- More students transitioned into regular classrooms sooner and had sustained academic success.
- Many students transitioned into gifted classes.
- The more continuous years that students were in BCIRC (when all grade levels implemented the model), the greater the academic, linguistic, and social gains.
- BCIRC students did better than control groups on criterion-referenced tests that measured reading and writing proficiencies in both languages.
- BCIRC students typically won first place in school and district writing contests, science fairs, and other academic contests.
- BCIRC student writing samples were rated higher on quantity and quality in comparison to their equivalent groups. They had longer narratives and higher "quality" scores for writing in two languages. (See Hertz-Lazarowitz & Calderón, 1994; and Calderón, 1994c for additional descriptions of the results.)

Better Anglo/Hispanic Relations and Liking of "Spanish"

Student attitudes toward working in cooperative groups and toward the language of instruction were assessed with the Cooperative Attitude Reaching Education (CARE) scales. On a scale of 1-3 (1=very much, 2=some, 3=not at all), the great majority of students in the two-way bilingual program rated items dealing with their feelings toward others as a 1. The cumulative percentage of students selecting the ranking of 1 or 2 ranged from 87 to 97 percent. The majority of students also felt that their classmates liked them, and 64 percent gave the item a ranking of 1. Students also gave high rankings to items related to their attitude towards school and specifically their class. When asked if they liked to read and write in English and Spanish, a cumulative percentage of 92 percent indicated that they liked to do so in English, 86 percent indicated the same for Spanish, and 88 percent of the students liked to read and write in either language in groups. These are the most positive results gathered in the past 3 years of utilizing this instrument with students from various school districts and in comparison with different types of bilingual programs.

Benefits for Teachers: A Positive Context for Teachers To Construct Their Own Knowledge

Many studies in El Paso and Juárez have focused on identifying the best promising staff development and teacher support practices for implementing a complex cooperative learning model such as BCIRC (Calderón, 1994c, 1994d). The results of these studies give us insights on the following components:

- elements of a positive school context for teacher development;
- the content and process of the most effective development activities;
- how and which cooperative learning strategies can be used as effective staff development tools;
- stages that teachers go through when implementing cooperative learning models;
- how teachers construct their Teachers' Learning Communities (TLCs) for continuous improvement and types of collaborative activities conducted in weekly TLCs; and
- how teachers become researchers and trainers of other teachers and curriculum developers (see Calderón, 1994a, 1994b, 1994c; Calderón & Durán, in press; Hertz-Lazarowitz & Calderón, 1994).

Professional Development for the Year 2000 Begins Now for Teachers

The preparation for the two-way bilingual program was far from fast flimsy fixes. The teachers, principals, resource teachers, and project director attended a 3-hour workshop every Wednesday for the first year.

They also worked on curriculum development and attended more in-service training during the summer. The comprehensive staff development components of process and content were presented in *both* Spanish and English.

The process consisted of presentation of theory, modeling of teaching strategies, peer practice at the workshops, peer coaching in the schools, and lesson development. The content consisted of theories of first- and second-language acquisition; culture, history, and values of the students; and an extensive repertoire of teaching strategies and alternative assessment techniques.

The teaching strategies and models consisted of the inquiry model (Joyce, Weil, & Showers, 1992), bilingual group investigation (Hertz-Lazarowitz & Calderón, 1994; Sharan, 1992), the Bilingual Cooperative Integrated Reading and Composition (Stevens et al., 1987; Calderón, 1994i), concept attainment, and discovery models (Joyce et al., 1992). Teachers and administrators also studied research on staff development, implementation of change, systems thinking, building communities of learners, Accelerated Schools' philosophy, and collegial models.

In addition to the Wednesday staff development sessions, teachers conducted their Teachers' Learning Community (TLC) sessions once a month, where they shared their student products, successes, and failures; read journal articles to each other; and used a variety of activities to construct their own learning experiences and fine-tune their implementation.

What Do Teachers Accomplish in Learning Communities?

Teachers need a place where they can solve complex problems of implementation. They need a place to reflect on their practice, share exciting successes, gauge their performance, and solve problems with the help of others who are "in the same boat" (Little, 1982; Fullan, 1990). These self-directed collaborative study groups are places in schools or universities where colleagues can

- identify areas of interest, problems, and solutions;
- plan, organize, and evaluate their professional development activities;
- share knowledge, teaching skills, and student products;
- schedule peer observations and coaching; and
- plan binational activities.

Observations of Teachers' Learning Community (TLC) activities in bilingual settings provide ample variety of activities that teachers have constructed to create meaning of their learning (Calderón, 1994a). Any place in the school can be designated as a TLC. One example of a TLC is a group of sixth-grade teachers from Harris Middle School in San Antonio

Independent School District. They selected their science lab as their TLC. On *Mondays* they talk about curriculum, *Tuesdays* are for meeting with the principal to take care of "school business," *Wednesdays* are for studying articles and furthering their knowledge base, *Thursdays* are for solving problems about individual students, *Fridays* are for catch-up or "unfinished business." They bring "goodies" to eat and celebrate the accomplishments of the week.

Cooperative Learning As a Tool for Staff Development

Staff development interventions for teachers must provide ongoing, interactive, cumulative learning on the multiple aspects of education of language-minority students in order to develop new conceptions, skills, and behaviors. The basis of learning is interaction. Teachers learn by interacting with consultants and university faculty, but mainly with peers (Tharp & Gallimore, 1988; Fullan, 1990; Calderón, 1992). Interactions take place during training activities, observation, and discussion of teaching demonstrations; practice of the teaching behaviors; peer feedback and coaching cycles; and, at intense levels, during problem solving in TLCs.

Teacher development designs can capitalize on the essentially social nature of teaching and learning and use cooperative learning for both purposes. Cooperative learning structures help teachers learn how to use cooperative structures in their classroom but also help teachers develop in several other ways. For instance, cooperative learning (CL) can be included in the process for in-service training with four purposes in mind:

1. to teach the content of the training focus;
2. to teach, apply, and internalize principles of adult learning, coaching, feedback, and support techniques;
3. to conduct reflection, decision making, and problem solving activities; and
4. to learn how to use CL strategies in the classroom. (For a full description of how to conduct this type of in-service training, see Calderón, 1994e, 1994f, 1994g.)

Binational Staff Development Activities

Last summer, the staff development component took on a new twist. Teachers attended a 1-week summer institute in Juárez on Bilingual Cooperative Integrated Reading and Composition (BCIRC) and on group investigation, conducted in Spanish by teachers from Juárez who are also implementing those models. Juárez teachers attended a 1-week institute on BCIRC in El Paso, conducted in English. They not only learned BCIRC teaching strategies but also fine-tuned their English. Teachers from El Paso went to a 1-week institute in Juárez and learned BCIRC strategies and fine-tuned their Spanish.

During the school year, teachers from Juárez presented workshops in Spanish to teachers in El Paso. Relationships flourished, and the contact and exchanges have continued. There are plans to continue the summer institutes in both cities.

The Dangers of Quick Fixes and Superficial Exchanges

The successes that have been documented across multiple settings prove the effectiveness of a comprehensive model for change that includes curriculum, teaching methods, theory, staff development designs, and teachers' learning communities. It is important to highlight, however, that the successes were commensurate with a strong philosophy of implementation and teacher support. In several other settings, the erosion and misapplication of BCIRC were observed when commitment to its philosophy and teacher support were missing.

First, BCIRC is a mind-set for the project implementers that involves a strong philosophy of equity, quality, and high expectations for all learners. The learners include administrators, teachers, parents, and students. The social development of intelligence is the mechanism that ultimately produces observed benefits. Therefore, cooperative learning is an integral part of literacy, social, and cognitive development. Teachers and administrators believe that cooperative learning is the best way for students to learn and they themselves practice collegial learning, coaching, collaborative decision making, planning, and ongoing assessment and improvement.

The mind-set of cooperation becomes the source for creating positive change and innovation (Senge, 1990). Although change does not come quickly, change becomes a desirable goal when colleagues have an opportunity to take control of organizing their learning. Addressing the needs of language-minority students must become a cooperative and comprehensive program.

Placing students in groups and encouraging them to work together through cooperative structures is not sufficient to produce significant learning gains. In classrooms of teachers who attended only a few days of in-service on cooperative learning, the following pattern has been observed (Hertz-Lazarowitz & Calderón, 1994):

- students working with low-level content in teams,
- students working with unchallenging tasks,
- one or two students doing the work for the team,
- students working with a low level of cooperation, and
- unchanged student achievement and test scores.

When interviewed, the teachers of these students identified the following barriers to effective implementation of cooperative learning:

- inflexible schedules (little time for group activities);

- the need to "cover certain material" or else they would be in trouble;
- curriculum designed for the traditional classroom;
- no time to teach social norms or the discourse of cooperation;
- no time for lesson development;
- problem students would not cooperate;
- not enough knowledge to make situational decisions about team formation, team building, teaching strategies to use, etc.;
- grading difficulties;
- pressure to teach to the district's or state's test;
- administrators wanted dramatic results immediately; and
- supervisors did not know how to evaluate cooperative learning lessons.

These barriers exist when schools do not provide comprehensive staff development and follow-up support systems for teachers.

Effective Staff Development Process

The staff development portion of our Cooperative Learning in Bilingual Settings study (Calderón, 1994c, 1994d) focused on (1) the content that teachers needed in order to promote a cooperative learning philosophy, appropriate teaching skills, and fidelity to the mode; (2) the process of teacher development; and (3) ways of organizing support systems for teachers trying to shift into a new instructional philosophy and delivery system.

In essence, the findings confirmed that although comprehensive coverage of content at the teacher in-service sessions is vitally important, the process for renewal and follow-up support systems for collegial learning are critical. Without certain processes for preparing teachers, the content never transfers into their active teaching repertoire. Therefore, the teaching philosophies and methods we would like teachers to espouse never transfer into the classroom—no matter how many hours or days or monies are spent on in-service workshops!

The professional development processes that help teachers transfer desired knowledge, behaviors, and appropriate decisions into the classroom can be summarized as follows:

- presentation of theory, philosophy, and research on cooperative learning, literacy development, alternative assessment, and teacher professional development; followed by extensive observation of CIRC and BCIRC teaching models conducted in both languages;
- analysis and discussion of student adaptation and modification to meet diverse needs;
- management of heterogeneous grouping in two languages for instruction;
- activities for teachers and students for developing cooperative skills and positive collegial relationships;

- communication skills and protocols for peer coaching, e.g., offering help, accepting help, and making suggestions to the teacher for improvement;
- guided practice with feedback from peer coaching, mentoring, and interactive peer journals;
- video analysis and reflection activities of own teaching performance and decisions;
- time blocks for adapting school curriculum and lesson planning;
- study and analysis of student performance, alternative assessment processes, and portfolio assessment; and
- ways to sustain self-directed collaborative study groups or Teachers' Learning Communities at schools where colleagues continue to refine their practices, celebrate their successes, and deal with problems.

Genuine Change at the Teacher Level Is Multidimensional.

When attempting to implement cooperative learning, there are at least four dimensions of personal change for *mainstream classroom teachers*:

- the integration of new teaching approaches into the teacher's repertoire,
- the use of new revised materials to go with those approaches,
- the possible alteration of beliefs or pedagogical assumptions, and
- the incorporation of new classroom norms into the teaching process.

For *bilingual teachers* there are at least two more:

- the development of proficiency in two languages and fluency for delivering the new teaching approaches, and debriefing of higher-order thinking and processing of complex information; and
- the techniques to address students' mixed levels of linguistic and conceptual complexity.

This comprehensive staff development program has major implications for school restructuring efforts. The critical elements of effective teacher development should be incorporated into the school's organizational development plan. In essence, teachers of language-minority students need to know how to create the kind of classroom environment that will facilitate bilingual literacy, content learning, and pride in being bilingual and bicultural. Without appropriate support, teachers will have an insurmountable task.

Why Cooperative Learning for All?

Since no one has the answers to the complex problems facing our border schools today, educators from both sides must work together to solve them. The more adults work together, the more opportunities they create for unlocking complex challenges and for solving problems with trust and mutual respect (Liebermann, 1986). For years, Johnson and Johnson

(1987), proponents of cooperative learning, have been proposing collegial support groups as a tool for educational reform. They found that competitive and individualistic environments are less effective in achieving positive outcomes for adults. They concluded that cooperation among adults promotes achievement, positive interpersonal relationships, social support, and self-esteem.

Cooperative learning provides the structures that

- enable and support difficult work;
- facilitate joint reflection on new knowledge; and
- teach group skills, conflict management, consensus building, decision making, and critical inquiry, while maintaining the dignity of individual team members.

In Juárez and El Paso, cooperative learning has provided a common theme, a common strategy, a point of departure where everyone is a learner. There are no experts and novices. The teachers in Juárez are highly skilled in using CL for middle schools, while the teachers in El Paso have tremendous expertise at the elementary level. Each takes turns being expert and novice. Both will become novices as staff development incorporates technology as another tool for cooperative learning.

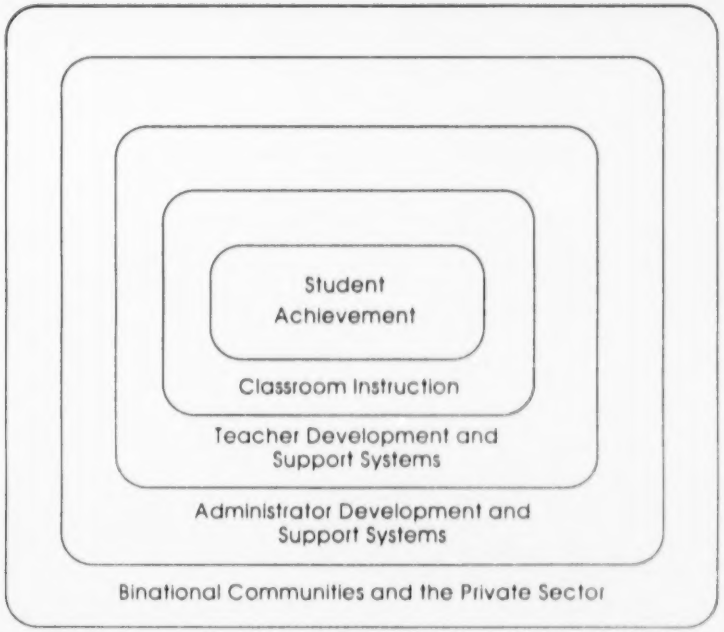
Pulling It All Together

This chapter has described research-based projects involving student achievement, immigrant students, second-language acquisition, biliteracy, instructional methods, bilingual teacher development, staff development design, cooperation among adults, learning communities, and program implementation. All of these come together to form the theoretical and practical underpinnings of the Binational Model. Graph 1 (page 224) illustrates how these projects are triangulated to relate to one another, all the while creating an impact on the students.

The Binational Model operates simultaneously on five levels: (1) cultivating relationships, (2) providing comprehensive staff development, (3) providing continuous information and networks, (4) implementing innovations in schools, and (5) conducting research and evaluation.

The comprehensive model addresses various layers simultaneously. (See Graph 2, page 225.)

Most attempts at binational exchanges tend to stay at the information stage. Or, they are one-sided in nature. For instance, Mexican teachers are recruited to teach in U.S. schools but not vice versa. Teachers from the United States go to Mexico for brief courses, but rarely is the same opportunity offered to Mexican teachers. Exchanges must be two-way exchanges. With this in mind, the Binational Model seeks to promote equivalent structures where there are ample opportunities for everyone who wants to participate.



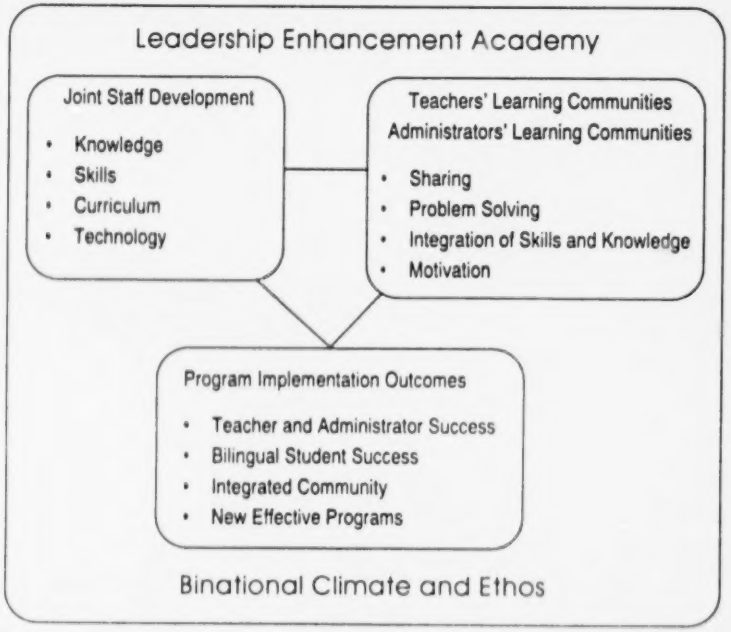
Graph 1

The model of staff development is currently organized to provide opportunities to participants for

- acquisition of knowledge and information processing;
- skill development (teaching, writing, researching, using technology);
- acquisition of a second language;
- rewriting of curricula and materials;
- gathering and disseminating local culture (folk stories, art, history, etc.); and
- gathering and disseminating children's literature in Spanish and English.

The mechanism for knowledge and skill development is orchestrated through

- joint workshops;
- conferences and seminars;
- university courses;
- certificate programs;
- intern programs;
- peer coaching across the border;
- mentoring programs;



Graph 2

- principals shadowing principals;
- student, teacher, and administrator exchanges;
- school visitations and classroom observations;
- joint curriculum development;
- joint research; and
- teachers training teachers.

Implications from this program, which will be studied for the next 5 years, have already singled out some premises about the future of staff development:

1. Bilingualism and biculturalism are developed to a higher degree of comfort and quality in a context where the two cultures interact.
2. The best context for complex learning is through interaction in cooperative heterogeneous teams.
3. Learning is enhanced when participants are assisted by more capable peers (Vygotsky, 1978), and each cohort of teachers takes turns being the more capable peers.
4. Language and cultural differences dissipate when educators are learning that which is meaningful and relevant to their students' needs.
5. Staff development approaches, themes, and strategies; instructional repertoires for teachers; and leadership models cut across cultures. We

all have the same problems, dreams, aspirations, fears, and need for companionship.

6. Resources can stretch a long way when shared with others. The more you give, the more you receive.

Webster's Dictionary defines the word "collaboration" as working with the enemy or the invader. Binational staff development helps all of us learn to work with the real enemy—our own fears and biases that invade us constantly. By working with others, we learn to work out those fears.

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